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| 09/646,897      | 12/11/2000  | Patrick A. Gane      | 197317US0PCT        | 6170             |

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EXAMINER

HALPERN, MARK

| ART UNIT | PAPER NUMBER |
|----------|--------------|
|----------|--------------|

1731

DATE MAILED: 10/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/646,897

Applicant(s)

GANE ET AL.

Examiner

Mark Halpern

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 and 18-44 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-12, 18-21, 23, 24, 26, 29, 31, 32, 34-36, 38 and 40-44 is/are rejected.
- 7) ☒ Claim(s) 6, 13, 22, 25, 27, 28, 30, 33, 37, 39 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3/6/02 6) ☐ Other: \_\_\_\_\_

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### **DETAILED ACTION**

1) Acknowledgement is made of Amendment received 7/24/2003. Applicants amend claims 1-14, 18-37, cancel claims 15-17, and offer new claims 38-44, for consideration.

#### ***Specification***

2) The amendment filed 7/24/2003, is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material which is not supported by the original disclosure is as follows: in amended paragraph bridging pages 8 and 9, line 15, of the Specification, compound dimethyldiallylammonium chloride is introduced.

Applicant is required to cancel the new matter in the reply to this Office Action.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3) Claims 7 and 43 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to

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one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 7, line 12, and Claim 43, line 15, recite compound, dimethyldiallylammonium chloride, which is not in the original specification.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4) Claim 42 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 42 is not clear as to phrase recited in lines 2-3: "or pigments. which is macroscopically homogeneous."

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5) Claims 1-2, 5, 7-12, 18, 29, 34, 38, 44, are rejected under 35 U.S.C. 103(a) as obvious over Naydowski (5,605,568).

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Claims 1-2, 5, 7-10, 18, 34, 44: Naydowski discloses a coating pigment slurry composite that includes the following ingredients: calcium carbonate, talc, and a binder. Calcium carbonate represents component that has a hydrophilic site. Talc represents component that has an organophilic site. The binder is a polymer or copolymer of acrylic, methacrylic, itaconic, crotonic or fumaric acids (col. 5, lines 1-20, col. 7, lines 30-31). The slurry includes water (col. 3, line 37). The composite components are bound by the binder. Naydowski uses a novel type of binder (col. 2, lines 10-12). Naydowski is silent on the components being co-structured or co-adsorbed. However, it would have been obvious, to one skilled in the art at the time the invention was made, that the composite components are co-structured or co-adsorbed because the components are bound by the binder, and it is the function of a binder to bind the compounds of the composite. The present specification defines as forming a structure comparable to a bond or an adhesion between the components.

Claims 11-12, 38: the percentage of calcium carbonate is 24 to 64 % by weight; the percentage of talc is 5 to 48 % by weight; the percentage of binder is 1.4 % (col. 3, lines 35-46).

Claim 29: the composition is used for coating paper especially for gravure printing (Abstract, and col. 7, lines 15-17).

6) Claims 1, 3-5, 7-12, 18, 21, 26, 29, 34-35, 44, are rejected under 35 U.S.C. 103(a) as obvious over Bergmann (5,439,558).

Claims 1, 3-5, 7-10, 18, 34, 44: Bergmann discloses a dry paper coating composite that includes the following ingredients: calcium carbonate, talc, and a binder.

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Calcium carbonate represents component that has a hydrophilic site. Talc represents component that has an organophilic site. The binder is an acrylic acid ester (col. 5, lines 20-45). The composite components are bound by the binder. Bergmann is silent on the components being co-structured or co-adsorbed. However, it would have been obvious, to one skilled in the art at the time the invention was made, that the composite components are co-structured or co-adsorbed because the components are bound by the binder, and it is the function of a binder to bind the compounds of the composite. The present specification defines as forming a structure comparable to a bond or an adhesion between the components.

Claims 11-12: the percentage of calcium carbonate is 55 % by weight; the percentage of talc is 40 % by weight; the percentage of binder is 4-7 % (col. 4, lines 38-42, col. 5, lines 36-45).

Claim 29: the composition is used for coating paper (Abstract).

Claim 21, 26: the Bergmann paper coating contains color of gloss 50 which is higher than the brightness of the present invention of 48.6 as disclosed in Table 9 of the present invention.

Claim 35: Bergmann discloses a sheet of base paper to be coated (col. 5, line 20).

7) Claims 14, 20, 23, 31, 40-43, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergmann in view of Andersen (5,662,731).

Claims 14, 20, 23, 31: Bergmann is applied as above for claim 1, Bergmann fails to disclose the composite yield stress. Andersen discloses a composite of calcium

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carbonate, talc and a binder of a yield strength of 10 Pa (col. 24, lines 60-65). The yield strength of composite of Andersen exceeds the yield stress of present composite as recited in present Table 3. It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Andersen and Bergmann, because such a combination would provide a greater range of composite applications in the products of the design of Bergmann.

Claims 40-43: the yield strength of Anderson is in some instances four times the yield stress of present invention as represented by present Table 3.

8) Claims 24, 32, 36, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bergmann in view of Arrington-Webb (5,584,924).

Claims 24, 32: Bergmann is applied as above for claim 21, Bergmann fails to disclose the paper coating light scattering coefficient. Arrington-Webb discloses an compound of calcium carbonate and clay of improved opacity having a light scattering coefficient of from about 0.5 to about 1.6 (x 1,000 sq. ft. per pound)(col. 4, lines 10-17), which calculates to from about 102 to about 327 m<sup>2</sup>/kg. Said scattering coefficient is of range that is greater than the scattering coefficient of the present invention as disclosed in Table 6 of the invention. It would have been obvious, to one skilled in the art at the time the invention was made, to combine the teachings of Bergmann and Arrington-Webb, because such a combination would extent the application of products of the design of Bergmann.

Claim 36; Arrington-Webb fails to disclose the opacity level, however with light scattering coefficient as disclosed above, it would have been obvious, to one skilled in

the art at the time the invention was made, that the opacity would also exceed the opacity of the present invention as disclosed in Tables 7 and 11 of the invention.

***Allowable Subject Matter***

9) Claims 6, 13, 19, 22, 25, 27-28, 30, 33, 37, 39, would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The primary reason for indicating allowable subject matter is that the cited prior art does not show: a composite compound of mineral or organic fillers or pigments that has a binding agent supported by gas (claim 6); a composite compound of mineral or organic fillers or pigments that is macroscopically homogeneous (claims 13, 19, 22, 30); a composite compound of mineral or organic fillers or pigments used as a paper coating color or a paper surface treatment of a curve representative of the tack force claimed (claims 27, 33) or of whiteness claimed (claims 25, 37) or of print density claimed (claim 28) or a composition amount of the binding agent claimed (claim 39).

***Response to Amendment***

10) Reference to drawings made in the amended Specification is accepted.



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11) Claims 11-12, 14, 20, 23-26, 31, rejection under 35 U.S.C. 112, second paragraph, is withdrawn in view of amended claims.

12) Applicants' arguments filed 7/24/2003, have been fully considered but they are not persuasive.

Applicants allege that the cited reference, Naydowski, does not disclose the invention, in that the mixture of Naydowski, of calcium carbonate, talc, water and a combination of adjuvants, does not represent good co-structuring or co-adsorption, and in fact the ingredients of said mixture prevent co-structuring or co-adsorption.

Applicants cite test results that disclose poor results of the Naydowski mixture.

Examiner responds that the cited mixture of Naydowski is using a binder that bounds the components. Naydowski uses a novel type of binder(s) that shows good results. The results of the cited prior art may not be of quality of the present invention, however, it would have been obvious, to one skilled in the art at the time the invention was made, that the composite components are co-structured or co-adsorbed because the components are bound by the binder, and it is the function of a binder to bind the compounds of the composite. The present specification defines as forming a structure comparable to a bond or an adhesion between the components.

Applicants' argument in reference to the rejection over Bergmann is same or similar as the argument presented above in regard to rejection over Naydowski.

**Conclusion**

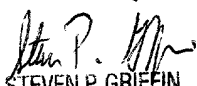
13) Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

14) Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Halpern whose telephone number is 703-305-4522. The examiner can normally be reached on Mon-Fri, (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 703-308-1164. The fax phone numbers for the organization where this application or proceeding is 703-872-9309.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0651.

  
STEVEN P. GRIFFIN  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700

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MH

Mark Halpern  
Patent Examiner  
Art Unit 1731

October 10, 2003



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